

9. Correspondence Files.
 10. Full set of updated Record Drawings (As-Built Drawings) and Record Specifications.
- B. Document Keeping Requirements: Maintain required documents as follows:
1. Contractor shall store documents in field office apart from documents used for field construction.
 2. Contractor shall provide files and racks for document storage.
 3. Contractor shall file documents in format in accordance with Division numbering indicated in Specifications Table of Contents.
 4. Contractor shall maintain documents in clean, dry legible conditions.
 5. Contractor shall not use the documents in the field.
 6. Contractor shall provide access to documents at all times for inspection by COTR.
- C. Contractor shall keep Record Documents current. Make documents available for inspection at all times and as part of monthly progress/payment meeting.
- D. Contractor shall not permanently conceal Work until specified information has been recorded.
- E. Legibly mark reproducible drawings to record manufacturer, trade name, catalog number, and supplier for each product and item of equipment actually installed.
- F. Comply with Section 01 78 39 "Project Record Documents" for recording, format, and delivery of Record Documents at end of Construction.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Comply with requirements specified in other Sections.

Retain subparagraph below for LEED projects and projects with specific sustainable design requirements that may affect Contractor selection of materials used in patching.

1. For projects requiring compliance with sustainable design and construction practices and procedures, use products for patching that comply with requirements in Section 01 81 13 "Sustainable Design Requirements."
- B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use materials that visually match in-place adjacent surfaces to the fullest extent possible.
1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide a match acceptable to COTR for the visual and functional performance of in-place materials.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Identification: Contracting Officer's Technical Representative (COTR) will identify existing control points and property line corner stakes.
- B. Verify layout information indicated, in relation to property survey and existing benchmarks, before proceeding to lay out Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
 - 1. Do not change or relocate benchmarks or control points without prior written approval of COTR. Promptly report lost or destroyed reference points or requirements to relocate reference points because of necessary changes in grades or locations.
 - 2. Promptly replace lost or destroyed Project control points. Base replacements on original survey control points.
- C. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, mechanical and electrical systems, and other construction affecting the Work.
 - 1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; underground electrical services, and other utilities.
 - 2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.
- D. Existing Utilities and Equipment: Existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify existence and location of underground utilities and other construction.
 - 1. Prior to construction, verify location and invert elevation at points of connection as indicated on Drawings.

Retain paragraph and subparagraph below for renovation work. Revise to suit Project.

Revise first paragraph and subparagraphs below to suit Project. Verify with authorities having jurisdiction and utility companies. Coordinate with Division 2 Sections.

- E. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

Delete first subparagraph and associated subparagraphs below if not required.

- 1. Written Report: Where a written report listing conditions detrimental to performance of the Work is required by other Sections, include the following:
 - a. Description of the Work.
 - b. List of detrimental conditions, including substrates.
 - c. List of unacceptable installation tolerances.
 - d. Recommended corrections.
- 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
- 3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.

4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
- F. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

Revise paragraph below to suit Project.

- A. Existing Utility Information: Furnish information to District that is necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction. Coordinate with authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by District or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 1. Notify District not less than two days in advance of proposed utility interruptions.
 2. Do not proceed with utility interruptions without District's written permission.
- C. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- D. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- E. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to COTR. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

3.3 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
 1. Make vertical work plumb and make horizontal work level.
 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
 4. Maintain minimum headroom clearance of 8 feet in spaces without a suspended ceiling.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Final Completion.

- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- F. Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and number to securely anchor each component in place, accurately located and aligned with other portions of the Work. Where size and type of attachments are not indicated, verify size and type required for load conditions.
 - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by COTR.
 - 2. Allow for building movement, including thermal expansion and contraction.
 - 3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
- H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.4 CUTTING AND PATCHING

- A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
 - 1. Cut in-place construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.
- B. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during installation or cutting and patching operations, by methods and with materials so as not to void existing warranties.
- C. Temporary Support: Provide temporary support of work to be cut.
- D. Protection: Protect in-place construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.
- E. Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage to adjoining areas is unavoidable, coordinate cutting and patching according to requirements in Section 011000 "Summary."
- F. Existing Utility Services and Mechanical/Electrical Systems: Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to **minimize** interruption to occupied areas.

- G. Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots neatly to minimum size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.
 3. Concrete and Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.
 4. Excavating and Backfilling: Comply with requirements in applicable Sections where required by cutting and patching operations.
 5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.
 6. Proceed with patching after construction operations requiring cutting are complete.
- H. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable. Provide materials and comply with installation requirements specified in other Sections, where applicable.
1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical integrity of installation.
 2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will minimize evidence of patching and refinishing.
 - a. Clean piping, conduit, and similar features before applying paint or other finishing materials.
 - b. Restore damaged pipe covering to its original condition.

Insert specific refinishing requirements for floors, walls, and ceilings. Revise "Floors and Walls" Subparagraph below to suit Project.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a painted surface, prepare substrate and apply primer and intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over entire unbroken surface containing the patch. Provide additional coats until patch blends with adjacent surfaces.
 4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
 5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight condition and ensures thermal and moisture integrity of building enclosure.
- I. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils, putty, and similar materials from adjacent finished surfaces.

3.5 STARTING AND ADJUSTING

- A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.
- B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.
- C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

3.6 PROTECTION OF INSTALLED CONSTRUCTION

Revise first paragraph below to suit Project conditions and special Owner requirements.

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Final Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.
- C. District reserves the right to protect installed Work to prevent damage and deterioration if the Contractor fails to protect the installed Work in a proper manner. The costs incurred by the District shall be paid by the Contractor.

3.7 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
 - 1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.
- B. Restore permanent facilities used during construction to their specified condition.
- C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.
- D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.
- E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous construction waste.
 - 2. Recycling nonhazardous construction waste.
 - 3. Disposing of nonhazardous construction waste.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Disposal: Removal off-site of construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- C. Recycle: Recovery of construction waste for subsequent processing in preparation for reuse.
- D. Salvage: Recovery of construction waste and subsequent sale or reuse in another facility.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Develop waste management plan that results in end-of-Project rates for salvage/recycling of not less than 75 percent by weight of total waste generated by the Work.
 - 1. Excavated soil and land clearing debris do not contribute to this requirement.
- B. Salvage/Recycle Requirements: District's goal is to salvage and recycle as much nonhazardous construction waste as possible including the following materials:
 - 1. Construction Waste:
 - a. Masonry, stone, and CMU.
 - b. Lumber.
 - c. Wood sheet materials.
 - d. Wood trim.
 - e. Metals.
 - f. Roofing.
 - g. Insulation.

- h. Gypsum board.
- i. Resilient floor.
- j. Ceiling panels.
- k. Piping.
- l. Electrical conduit.
- m. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.
 - 4) Plastic sheet and film.
 - 5) Polystyrene packaging.
 - 6) Wood crates.
 - 7) Plastic pails.

1.5 SUBMITTALS

- A. Waste Management Plan: Submit copy of plan within 7 days of date established for the Notice to Proceed for review and approval by COTR.
- B. Waste Reduction Progress Reports: Submit copy of report monthly. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste salvaged, both estimated and actual in tons.
 - 5. Quantity of waste recycled, both estimated and actual in tons.
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for Final Completion, submit three copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- H. Qualification Data: For Waste Management Coordinator.

1.6 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: LEED Accredited Professional by U.S. Green Building Council. This person may be assigned other duties on the Project.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 - 2. Review requirements for documenting quantities of each type of waste and its disposition.
 - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - 5. Review waste management requirements for each trade.

1.7 WASTE MANAGEMENT PLAN

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
 - 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 - 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 - 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 - 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 - 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:

1. Total quantity of waste.
2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
3. Total cost of disposal (with no waste management).
4. Revenue from salvaged materials.
5. Revenue from recycled materials.
6. Savings in hauling and tipping fees by donating materials.
7. Savings in hauling and tipping fees that are avoided.
8. Handling and transportation costs. Include cost of collection containers for each type of waste.
9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement waste management plan as approved by the COTR. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 1. Comply with Division 01 Section 01 50 00 "Temporary Facilities and Controls" for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 1. Distribute waste management plan to everyone concerned within three days of submittal return.
 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 2. Comply with Division 1 Section "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.

3.2 SALVAGING

- A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
 2. Pack or crate items after cleaning. Identify contents of containers.
 3. Store items in a secure area until installation.
 4. Protect items from damage during transport and storage.
 5. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Sale and Donation: Permitted. Contractor shall make arrangements to remove items off site for this purpose.

3.3 RECYCLING CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
1. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site. Include list of acceptable and unacceptable materials at each container and bin.
 - a. Inspect containers and bins for contamination and remove contaminated materials if found.
 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 3. Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 4. Store components off the ground and protect from the weather.
 5. Remove recyclable waste off District's property and transport to recycling receiver or processor.

3.4 RECYCLING CONSTRUCTION WASTE

- A. Packaging:
1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 2. Polystyrene Packaging: Separate and bag materials.
 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees on-site.
- C. Wood Materials:
1. Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.

- D. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - 1. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.5 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - 1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Burning: Burning of waste materials is permitted only at designated areas on District's property, provided required permits are obtained. Provide full-time monitoring for burning materials until fires are extinguished.
- D. Disposal: Transport waste materials and dispose of at designated spoil areas on District's property.
- E. Disposal: Transport waste materials off District's property and legally dispose of them.

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Conditions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Administrative and procedural requirements for Final Completion and Final Acceptance.
 - 1. Closeout requirements for specific construction activities are included in appropriate Sections in Divisions 02 to 26 .

1.3 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.

1.4 CLOSEOUT SUBMITTALS

- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.
- D. Elevator Certification: Inspection report and certificate from authorities having jurisdiction.
- E. Fire Sprinkler and Fire Alarm Certificate: Inspection report and certificate from authorities having jurisdiction.
- F. Warranty Information: Provide product and system warranties in binder. Refer to Section 01 78 00 "Warranties."
- G. All Record Drawings, Specifications, and other requirements specified in Section 01 78 39 "Project Record Documents."
- H. Mold Prevention Certification: Contractor: Submit letter of certification that Contractor has complied with requirements of Contract Documents for construction operations to prevent growth of mold.
 - 1. Submit certification on letterhead at same time as Application for Final Payment.

1.5 PRELIMINARY PROCEDURES

- A. Before requesting inspection for determining date of Substantial Completion, complete following, as appropriate to Project.

1. Advise Contracting Officer of pending insurance changeover requirements.
2. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
3. Obtain and submit releases permitting District unrestricted use of Work and access to services and utilities. Include final inspections, operating certificates, and similar releases.
4. Deliver tools, spare parts, extra materials, and similar items to location designated by COTR. Label with manufacturer's name and model number where applicable.
5. Advise COTR of changeover in HVAC and other utilities.
6. Submit changeover information related to District's occupancy, use, operation, and maintenance.
7. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
8. Submit Project Record Documents in accordance with Section 01 78 39 "Record Documents."
9. Submit final project photographs, damage or settlement surveys, property surveys, and similar final record information.
10. Submit final meter readings for utilities, measured record of stored fuel, and similar data as of date of Completion or when District took possession of and assumed responsibility for corresponding elements of Work.
11. Submit occupancy permits.
12. Ensure all project communication regarding RFIs, contract modifications, and meeting minutes are contained within internet-based Contract Project Management software system.
13. Fuel: At the time of Final Acceptance, the fuel oil tank for the emergency generator shall be full of fuel, filled by the Contractor.
14. Request a Punch List walk-through meeting with COTR.

- B. Inspection: Submit written request for inspection for Completion. On receipt of request, COTR will either proceed with inspection or notify Contractor of unfulfilled requirements. COTR will notify Contractor of Completion after inspection or will notify Contractor of items that must be completed or corrected before Completion can be achieved.

1. Reinspection: Request reinspection when Work identified in previous inspections as incomplete is completed or corrected.

1.6 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 14 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Certificates of Release: Obtain and submit releases from authorities having jurisdiction permitting District unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

2. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
 3. Submit maintenance material submittals specified in individual Sections, including tools, spare parts, extra materials, and similar items, and deliver to location designated by COTR. Label with manufacturer's name and model number where applicable.
 - a. Schedule of Maintenance Material Items: Prepare and submit schedule of maintenance material submittal items, including name and quantity of each item and name and number of related Specification Section. Obtain COTR's signature for receipt of submittals.
 4. Submit test/adjust/balance records.
 5. Submit sustainable design submittals required in Section 01 81 13 "Sustainable Design." Submit changeover information related to District's occupancy, use, operation, and maintenance.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 14 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
1. Advise District of pending insurance changeover requirements.
 2. Contact manufacturer to start process of the changeover of permanent locks and request delivery of cores and keys to District. Advise COTR in writing.
 3. Complete startup and testing of systems and equipment.
 4. Perform preventive maintenance on equipment used prior to Substantial Completion.
 5. Instruct District's personnel in operation, adjustment, and maintenance of products, equipment, and systems. Submit demonstration and training video recordings specified in Section 01 79 00 "Demonstration and Training."
 6. Advise District of changeover in heat and other utilities.
 7. Participate with District in conducting inspection and walkthrough with local emergency responders.
 8. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 14 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, COTR will either proceed with inspection or notify Contractor of unfulfilled requirements. COTR will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by COTR, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
 2. Results of completed inspection will form the basis of requirements for final completion.

1.7 FINAL COMPLETION PROCEDURES

- A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete the following:

1. Submit a final Application for Payment according to Section 01 29 00 "Payment Procedures."
 2. Submit closeout submittals specified in other Division 01 Sections, including project record documents, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 3. Punch List: Submit certified copy of COTR's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by COTR. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
 4. Certificate of Insurance: Submit evidence of final, continuing insurance coverage complying with insurance requirements.
 5. Submit pest-control final inspection report and warranty.
 6. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
 7. Complete final cleaning requirements, including touchup painting.
 8. Make final changeover of permanent locks and deliver keys to COTR. Label with manufacturer's name and model number where applicable.
 9. Complete broken, chipped, dented, or otherwise marred finish surfaces as described in "Repair of the Work" Article of this Section.
 10. Submit Contractor's Certificate of Final Completion on form attached to end of this Section.
- B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, COTR will either proceed with inspection or notify Contractor of unfulfilled requirements. COTR will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
- D. Final Property Survey: Coordinate with COTR for requirements for submitting the Final Property Survey for zoning approval.
- E. Final reports and certificates for systems that needs certification by authorities having jurisdiction, including but not limited to:
1. Fire Alarm System.
- 1.8 LIST OF INCOMPLETE ITEMS (PUNCH LIST)
- A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
1. Organize list of spaces in sequential order, [starting with exterior areas first] [and] [proceeding from lowest floor to highest floor].
 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
 3. Include the following information at the top of each page:
 - a. Project name.
 - b. Date.
 - c. Name of Architect.

- d. Name of Contractor.
- 3. Page number.
- 4. Submit list of incomplete items in the following format:
 - a. MS Excel electronic file. Architect, through COTR, will return annotated file.
 - b. PDF electronic file. Architect, through COTR, will return annotated file.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CERTIFICATE OF FINAL COMPLETION

- A. Contractor shall complete the "Contractor's Certificate of Final Completion" form found at the end of this Section or if approved by the Contracting Officer, may use the Certificate of Final Completion found in the Electronic Project Management system used on the Project.
- B. Substantial Completion will be granted when the Certificate of Occupancy is granted by the authority having jurisdiction; the Building Commissioning is considered complete by the District's Commissioning Authority, including training of District's employees and the Operation and Maintenance Manuals are delivered; and all material punch-list items are resolved to the satisfaction of the District.

3.2 REPAIR OF THE WORK

- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
- B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.
 - 1. Remove and replace chipped, scratched, and broken glass, reflective surfaces, and other damaged transparent materials.
 - 2. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.
 - a. Do not paint over "UL" and other required labels and identification, including mechanical and electrical nameplates. Remove paint applied to required labels and identification.
 - 3. Replace parts subject to operating conditions during construction that may impede operation or reduce longevity.
 - 4. Replace burned-out bulbs, bulbs noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.

3.3 COMPLETION OF PUNCH LIST

- A. Contractor shall begin performance of Punch List corrections immediately after receipt of the notice of the Punch List Work.
- B. Period to complete Punch List Work will be determined by the COTR. The time period for completion of the Punch List Work begins the first work day after the Punch List is provided to the Contractor. The COTR may extend the period to complete Punch List Work for specific Work which requires the receipt of long lead-time materials. However, all other Punch List Work shall be completed as required by this Section.
 - 1. Failure of the Contractor to begin the Punch List Work prior to the expiration of 3 calendar days after receipt of Punch List will be construed as failure to prosecute the Work of the Contract and shall be completed within 30 days.
- C. Punch List Work shall be continuously prosecuted once begun. Gap of 3 calendar days during which Punch List Work is not being performed on the job site will be construed as failure to prosecute the Work of the Contract.

3.4 SCHEDULE OF DOCUMENTS NEEDED FOR CLOSE-OUT PROCEEDURE

SPECIFICATION SECTION	TITLE OF DOCUMENT REQUIRED	WHEN TO SUBMIT	RECIPIENT
01 50 00 – Temporary Facilities & Controls	Mold-Free Construction Certificate	Substantial Completion	COTR
	O&M Manuals	Substantial Completion	COTR
	Building Commissioning Completion	Substantial Completion	COTR
	Punch-List Items Resolved	Substantial Completion	COTR
	Certificate of Occupancy		

END OF SECTION 017700

Contractor's Certificate of Final Completion follows.

CONTRACTOR'S CERTIFICATE OF FINAL COMPLETION

PROJECT: _____

CONTRACT FOR: _____

TO COTR: _____

CONTRACT DATE: _____

This is to certify that I am an authorized official of the Contractor, and have been properly authorized by said firm or corporation to certify following:

I know of my own personal knowledge, and do hereby certify on behalf of Contractor that the Work has been reviewed and inspected for compliance with Contract Documents, that it has been completed in accordance with Contract Documents, that all equipment and systems have been tested and are operating as required by the contract, that all Contract Closeout requirements have been completed and submitted.
Attached are three copies of the following documents, which are required prior to final payment:

- ☐ Certificates of inspections indicating compliance with requirements of Government authorities, including Certificate of Occupancy, have been obtained and are attached hereto.
- ☐ Certificate of site conformance by licensed land surveyor.
- ☐ List of Subcontractors and equipment suppliers.

I understand that acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at time of final Application for Payment.

CONTRACTOR: _____

BY: _____

Subscribed and sworn to me this

TITLE: _____

____ day of _____, 20____.

DATE: _____

NOTARY PUBLIC _____

My commission expires: _____

DISTRIBUTION: CONTRACTING OFFICER AND COTR.

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Conditions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for project record documents, including the following:
 - 1. Record Drawings.
 - 2. Record Specifications.
 - 3. Record Product Data.
 - 4. Miscellaneous record submittals.
- B. Project Record Documents record changes in the Work relative to the way the Work was shown and specified in the original Contract Documents. They also provide important information for the District's records that was not shown in the original Contract Documents but was produced during the construction stage of the Project. As such, they form an invaluable record for future reference for concealed conditions, facilities management processes, and future additions and renovations.
- C. Maintenance of Record Documents and Samples: Store record documents and Samples in field office apart from Contract Documents used for construction. Do not use Project Record Documents for construction purposes.
- D. Maintain record documents in good order and in clean, dry, legible condition. Make documents and Samples available at all times for Contracting Officer's Technical Representative's (COTR's) review.
- E. Record information immediately after it's obtained on the red-line pencil Record Documents. Contractor shall make all pre-final Record Documents available to COTR at all times at the Job Site.

1.3 RECORD DRAWINGS

- A. Markup Procedure: During construction, maintain set of blue- or black-line white prints of Contract Drawings and Shop Drawings for Project Record Document purposes.
 - 1. Mark Drawings to show actual installation where installation varies from installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. As applicable to Project, items required to be marked include, but are not limited to, following:
 - a. Dimensional changes to Drawings.
 - b. Revisions to details shown on Drawings.
 - c. Depths of foundations below first floor.

- d. Locations and depths of underground utilities.
 - e. Actual routing of piping and conduits.
 - f. Revisions to electrical circuitry.
 - g. Actual equipment locations.
 - h. Duct size and routing.
 - i. Locations of concealed internal utilities.
 - j. Changes made by change order.
 - k. Changes made following the COTR's instructions for Minor Change in Work.
 - l. Details not on original Contract Drawings.
2. Mark record prints of Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings location.
 3. Mark record sets with red erasable colored pencil. Use other colors to distinguish between changes for different categories of Work at same location.
 4. Mark important additional information that was either shown schematically or omitted from original Drawings.
 5. Note alternate numbers, change-order numbers, and similar identification.
- B. Responsibility for Markup: Individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, shall incorporate "as-built" information onto electronic CADD version of drawings.
1. Accurately record information in electronic format using software system approved by the COTR. Use the file naming convention established by the Construction Drawings.
 2. Copies of Red-Line As-Built in electronic form (example: PDF, JPEG, etc.) are not acceptable.
- C. Copies and Distribution: After completing preparation of editable electronic version of record drawings, print one copy for review/approval by COTR. Include appropriate identification, including titles, dates, and other information on cover sheets.
1. Upon approval by the COTR, submit electronic and 3 copies of the record set to COTR.
- D. Newly Prepared Record Drawings: Prepare new drawings instead of following procedures specified for preparing record drawings where new drawings are required, and COTR determines that neither original Contract Drawings nor Shop Drawings are suitable to show actual installation. New drawings may be required when change order is issued as result of accepting alternate, substitution, or other modification.
1. Consult with COTR for proper scale and scope of detailing and notations required to record actual physical installation and its relation to other construction. When completed and accepted, integrate newly prepared Drawings with procedures specified for organizing, copying, binding and submitting record drawings.

1.4 RECORD SPECIFICATIONS

- A. During construction period, maintain electronic and 3 copies of Project Specifications, including addenda and modifications issued, for Project Record Document purposes.

1. Mark Specifications to indicate actual installation where installation varies from that indicated in Specifications and modifications issued. Note related project record drawing information, where applicable. Give particular attention to substitutions, selection of product options, and information on concealed installations that would be difficult to identify or measure and record later. Incorporate all revisions into electronic version of specifications.
 - a. In each Specification Section where products, materials, or units of equipment are specified or scheduled, mark copy with proprietary name and model number of product furnished.
 - b. Record name of manufacturer, supplier, installer, and other information necessary to provide record of selections made and to document coordination with record Product Data submittals and maintenance manuals.
 - c. Note related record Product Data, where applicable. For each principal product specified, indicate whether record Product Data has been submitted in maintenance manual instead of submitted as record Product Data.
2. Upon completion of electronic version of Record Specifications, print one copy of complete set and provide to COTR for review/approval. Upon approval, submit electronic, editable copy and 3 hard copies of Specifications to COTR for District's records.

1.5 RECORD PRODUCT DATA

- A. During construction period, maintain one PDF copy and 3 hard copies of each Product Data submittal for Project Record Document purposes.
 1. Mark Product Data to indicate actual product installation where installation varies substantially from that indicated in Product Data submitted. Include significant changes in product delivered to site and changes in manufacturer's instructions and recommendations for installation.
 2. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 3. Note related Change Orders and markup of record Drawings, where applicable.
 4. Upon completion of markup, submit complete set of record Product Data to COTR for District's records.
 5. Where record Product Data is required as part of maintenance manuals, submit marked-up Product Data as insert in manual instead of submittal as record Product Data.

1.6 MISCELLANEOUS RECORD SUBMITTALS

- A. Refer to other Specification Sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Immediately prior to Completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for use and reference. Submit to COTR for District's records.

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

1.1 RECORDING

- A. Post changes and modifications to red-line Documents as they occur. Do not wait until end of Project.

END OF SECTION 017839